ABSTRACT OF THE DISCLOSURE

Stabilizers to be disposed on a surface of a semiconductor device component and methods of fabricating and disposing the stabilizers on semiconductor device components. Semiconductor device components including the stabilizers are also disclosed, as well as assemblies wherein the stabilizers are disposed between a semiconductor device component and a higher level substrate. One or more of the stabilizers are disposed on the surface of a semiconductor device component prior to bonding the same to a higher level substrate. Upon assembly of the semiconductor device component face-down upon a higher level substrate and joining conductive structures, such as solder structures, between the contact pads of the semiconductor device component and corresponding contact pads of the higher level substrate, the stabilizers at least partially stabilize the semiconductor device component on the higher level substrate to prevent tilting or tipping of the semiconductor device component relative to the higher level substrate. The stabilizers can also be positioned and configured to define a minimum, substantially uniform distance between the semiconductor device component and the higher level substrate. The stabilizers may be preformed structures which are attached to a surface of a semiconductor device component. Alternatively, the stabilizers can be fabricated on the surface of the semiconductor device component. A stereolithographic method of fabricating the stabilizers is disclosed. The stereolithographic method may include use of a machine vision system including at least one camera operably associated with a computer controlling a stereolithographic application of material so that the system may recognize the position and orientation of a substrate to which the material is to be applied.